

**REMARKS**

Claims 2-20 are pending in this application. Claim 1 is canceled without prejudice or disclaimer. Claims 2 and 3 are amended and new claim 20 has been added herein. The Abstract of the Disclosure has been amended.

The amendments to claims 2 and 3 place these claims in independent form. Applicants assert that no new matter is added by these amendments.

**The Abstract of the disclosure is objected to (Office action point 2).**

The objection is overcome by the amendment to the Abstract. The abstract has been amended to be one paragraph.

**Claim 1 is objected to (Office action point 3).**

The objection is moot in view of the cancellation of claim 1 without prejudice or disclaimer.

**Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamano (U.S. Patent No. 5,811,834) (Office action point 5).**

The rejection of claim 1 is moot in view of the cancellation of claim 1 without prejudice or disclaimer. Reconsideration of the rejection of claims 2 and 3 is respectfully requested.

Claims 2 and 3 have been amended to be independent and to incorporate the limitations of claim 1. Applicants note that the recitation of claim 1 regarding "a metal that is able to prevent

entering of an oxygen and a moisture ..." in the second conductive film is not included in the recitation of claims 2 and 3. Applicants additionally note that in amended claim 3, the recitation of "a laminated film made of TiN and Ti" has been changed to --a laminate film formed of a Ti film and a TiN film on said Ti film--.

New claim 20 has also been added and includes the recitation of --a laminate film formed of a Ti film and a TiN film on said Ti film--. Applicants note that the second conductive film of the amended claim 3 and the additional claim 20 are different in composition from that of the amended claim 2.

The cathode of the organic EL element in amended claim 2 consists of the first conductive film that contacts to the organic EL layer and the second conductive film that constitutes a laminated structure together with the first conductive film. The first conductive film contains the alkaline metal that has the small work function. The second conductive film contains the metal or its oxide selected from the group consisting of Ru, Rh, Ir, Os and Re that has the high barrier characteristic to the oxygen.

In the present invention, in order to prevent the oxidation of the first conductive film, the second conductive film is arranged on the first conductive film. This arrangement can prevent the degradation of the luminescence characteristic of the organic EL element and the peeling-off between the organic EL layer and the first conductive film.

On the other hand, the cathode of the organic EL element in Tamano consists of a conductive film of a single layer or a conductive film of two or more layers. The conductive film uses the

conductive material that has the small work function. The conductive material includes lithium (alkaline metal), calcium (alkaline earth metal), ruthenium and the like.

However, in Tamano, it is not shown of what conductive material is each of two layers. Especially, it is not shown of what conductive material is the upper layer (the second conductive film) of two layers. Also, Tamano does not show a purpose for the conductive film of the upper layer being arranged on the conductive film of the lower layer (first conductive film). Therefore, the present invention is different from the invention of Tamano in constitution and object.

Applicants therefore submit that claims 2 and 3, as amended, and new claim 20 are novel and are further non-obvious over Tamano '834.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

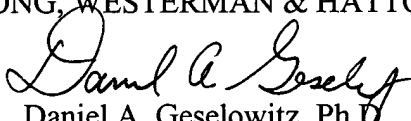
Amendment under 37 CFR 1.111  
Kota YOSHIKAWA

U.S. Patent Application Serial No. 09/916,314  
Attorney Docket No. 010935

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP

  
Daniel A. Geselowitz, Ph.D.  
Agent for Applicant  
Reg. No. 42,573

DAG/plb  
Atty. Docket No. **010935**  
Suite 1000  
1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



**23850**

PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made

H:\FLOATERS\DAG\Amendments\010935 4-9-03 amend

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE ABSTRACT**

Please amend the Abstract of the Disclosure as follows:

In an organic EL element, an organic EL layer is interposed between anodes and cathodes formed on a substrate. Each of the cathodes is made of a first conductive film that comes into contact with the organic EL layer and a second conductive film that constitutes a laminated structure together with the first conductive film. \_\_\_\_\_

\_\_\_\_\_The first conductive film contains any one of an alkaline metal and an alkaline earth metal. The second conductive film contains any one of at least one type metal selected from a group consisting of Ru (ruthenium), Rh (rhodium), Ir (iridium), Os (osmium) and Re (rhenium) and its oxide.

**IN THE CLAIMS:**

Please amend claims 2 and 3 as follows:

2. (Amended) An organic EL element ~~according to claim 1, wherein~~ comprising:  
an organic EL layer formed between an anode and a cathode; and  
said cathode consisting of a first conductive film that contacts to said organic EL layer and  
a second conductive film that constitutes a laminated structure together with said first conductive  
film, said first conductive film containing any one of an alkaline metal and an alkaline earth metal,  
and

said second conductive film contains containing any one of at least one type metal selected from a group consisting of Ru (ruthenium), Rh (rhodium), Ir (iridium), Os (osmium) and Re

(rhenium) and its oxide.

3. (Amended) An organic EL element ~~according to claim 1, wherein~~ comprising:  
an organic EL layer formed between an anode and a cathode; and  
said cathode consisting of a first conductive film that contacts to said organic EL layer and  
a second conductive film that constitutes a laminated structure together with said first conductive  
film, said first conductive film containing any one of an alkaline metal and an alkaline earth metal,  
and  
said second conductive film is formed of any one of a TiN film and a laminated laminate film  
made of TiN and Ti formed of a Ti film and a TiN film on said Ti film.